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		Examiner Name	A. Lewis		
Total Number of Pages in 1	This Submission 3	Attorney Docket Number	45751US012		
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PTO/SB/17 (10-03) Approved for use through 07/31/2006. OMB 0651-0032 1 4 2003 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Complete if Known EE TRANSMITTAL 834 **Application Number** for FY 2004 Filing Date TON 261 First Named Inventor Effective 10/01/2003. Patent fees are subject to annual revision. ĕWiS **Examiner Name** Applicant claims small entity status. See 37 CFR 1.27 3761 Art Unit 45751US012 330 TOTAL AMOUNT OF PAYMENT Attorney Docket No FEE CALCULATION (continued) METHOD OF PAYMENT (check all that apply) 3. ADDITIONAL FEES Money Check Credit card Other None arge Entity | Small Entity Deposit Account: Fee Fee **Fee Description** Fee Paid Code (\$) Code (\$) Deposit 501749 Account 65 Surcharge - late filing fee or oath 130 2051 1051 Number Surcharge - late provisional filing fee or Deposit 1052 50 2052 Account cover sheet Name Non-English specification 130 1053 130 1053 The Director is authorized to: (check all that apply) 1812 2,520 For filing a request for ex parte reexamination 1812 2.520

Credit any overpayments Charge fee(s) indicated below 920* Requesting publication of SIR prior to 1804 920 1804 ✓ Charge any additional fee(s) or any underpayment of fee(s) Examiner action Charge fee(s) indicated below, except for the filing fee Requesting publication of SIR after 1805 1.840 1805 1,840 Examiner action to the above-identified deposit account. Extension for reply within first month 1251 110 2251 55 **FEE CALCULATION** Extension for reply within second month 420 2252 210 1252 1. BASIC FILING FEE 2253 475 Extension for reply within third month 950 1253 arge Entity Small Entity Fee Paid Fee Fee Code (\$) Fee Description 1254 1,480 2254 Extension for reply within fourth month Code (\$) 1,005 Extension for reply within fifth month 1255 2,010 2255 1001 770 2001 385 Utility filing fee 1401 330 2401 165 Notice of Appeal 1002 340 2002 170 Design filing fee 330 165 Filing a brief in support of an appeal 1402 330 2402 2003 265 Plant filing fee 1003 530 145 Request for oral hearing 1403 290 2403 Reissue filing fee 1004 770 2004 385 1451 1,510 Petition to institute a public use proceeding 1451 1,510 Provisional filing fee 1005 160 2005 80 55 Petition to revive - unavoidable 1452 110 2452 SUBTOTAL (1) (\$) 665 Petition to revive - unintentional 2453 1453 1,330 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE 1501 2501 665 Utility issue fee (or reissue) 1.330 Fee Paid 2502 240 Design issue fee Extra Claims 1502 480 below **Total Claims** Х 320 Plant issue fee 640 2503 1503 130 Petitions to the Commissione TECHNOLOGY CENTER independent 1460 130 1460 R3700 Multiple Dependent 1807 50 Processing fee under 37 CFR 1.17(q) 1807 50 Large Entity **Small Entity** 1806 180 Submission of Information Disclosure Stmt 180 1806 **Fee Description** 40 Recording each patent assignment per Fee Fee Code (\$) Code (\$) 8021 40 8021 property (times number of properties) Claims in excess of 20 1202 18 2202 9 385 Filing a submission after final rejection (37 CFR 1.129(a)) 1809 770 2809 1201 86 2201 43 Independent claims in excess of 3 Multiple dependent claim, if not paid 385 For each additional invention to be 1810 770 2810 1203 290 2203 145 examined (37 CFR 1.129(b)) ** Reissue independent claims 2204 43 86 1204 385 Request for Continued Examination (RCE) 770 2801 1801 over original patent 900 Request for expedited examination 1802 1802 900 ** Reissue claims in excess of 20 2205 9 1205 18 of a design application and over original patent Other fee (specify) SUBTOTAL (2) *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$)

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Docket No.: 45751US012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JOSEPH P. KRONZER ET AL.

Serial No.: 08/661,834

Filed: June 11, 1996

FIBROUS FILTRATION FACE MASK For:

Box AF

Group Art Unit: 3761

Examiner: Aaron J. Lewis

BRIEF ON APPEAL

TECHNOLOGY CENTER R3700

Board of Patent Appeals and Interferences Commissioner for Patents Washington, D.C. 20231

Dear Sir:

This Appeal Brief is submitted in accordance with the terms of 35 U.S.C. § 134 and 37 C.F.R. § 1.192 in response to the final Office Communication mailed July 31, 2003. Appellants furnish the Appeal Brief in triplicate. The processing fee of \$330.00 (37 C.F.R. § 1.17(c)) is attached. Please charge any additional fees to Deposit Account No. 50-1749.

I. Real Party In Interest

The Minnesota Mining and Manufacturing Company and the 3M Innovative Properties Company, both of St. Paul, Minnesota, are the real parties in interest.

II. Related Appeals and Interferences

Appellants are unaware of any pending related appeals or interferences. The Board has previously ruled on one appeal in the parent application and one appeal in this application.

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III. Status of Claims

Claims 25-37 are pending in this application. Claims 25-37 have been rejected under 35 U.S.C. § 103 and are the subject of this appeal.

IV. Status of Amendments

No amendments have been filed after the final rejection.

V. Summary of the Invention

Appellants' invention is a fibrous filtration face mask that is capable of maintaining low degrees of surface fuzz. Persons who wear cup-shaped fibrous filtration face masks have complained that the fibers in the mask create a tickling sensation that makes them want to scratch their face. Because fibrous filtration face masks are worn to protect wearers from breathing impurities in the air and/or protect others from being exposed to impurities exhaled by the wearer, persons wearing such masks must resist displacing the mask from their face to relieve the itching sensation. Otherwise, the wearer may risk exposing themselves or others to potentially dangerous substances.

The appellants have significantly alleviated the surface fuzz problem by providing a face mask that includes a non-woven fibrous layer that is molded into a cup-shaped configuration, where the fibrous layer contains at least about 40 weight percent thermally bonding fibers and at least about 10 weight percent bicomponent fibers. The molded, cup-shaped, non-woven fibrous layer has a surface fuzz value of not less than 7.5 after being subject to a surface fuzz abrasion test. If the bicomponent fiber content is 85 weight percent or greater, the surface fuzz value exceeds 8.0. The face mask of this construction may be assembled in accordance with the method that was patented by appellants in U.S. Patent No. 5,307,796.

VI. Issues Presented

- 1. What is the proper interpretation of claim 25?
- 2. What is the proper interpretation of claim 32?
- 3. Are claims 25 and 32 obvious to a person of ordinary skill in view of Dyrud under 35 U.S.C. § 103?

4. Are dependent claims 27, 28, 31, 33 and 35-37 obvious to a person of ordinary skill in view of Dyrud under 35 U.S.C. § 103?

VII. Grouping of Claims

In view of the rejections of record, the following groups of rejected claims will stand or fall together:

- 1. Claims 25, 26, 27, 29 and 30;
- 2. Claim 32;
- 3. Claims 28, 31, 33 and 35-37.

VIII. Argument

I. Interpretation of Claim 25

The Board of Appeals has made contradictory interpretations of claim 25.

A. The Board Correctly Interpreted Claim 25 In Its DECISION ON APPEAL

In the DECISION ON APPEAL (Paper No. 40), the Board reversed the rejection based on the second paragraph of section 112. On pages 3-4 of the Decision, the Board explained the meaning of the claim language "with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0." As stated by the Board:

the claim states that the non-woven fibrous layer have a fuzz value of not less than 7.5 <u>unless</u> the bicomponent fiber content is 85 weight percent or greater, in which case the fuzz value requirement must exceed 8.0

Decision On Appeal, page 4, lines 12-14 (emphasis in original).

Appellants agree completely with the Board's interpretation in the DECISION ON APPEAL.

B. The Board Incorrectly Interpreted Claim 25 In Its ON REQUEST FOR REHEARING

On pages 4-5 the ON REQUEST FOR REHEARING (Paper No. 42), the Board introduced a new, contradictory, and incorrect interpretation of claim 25. This new interpretation is wrong because it ignores "the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the

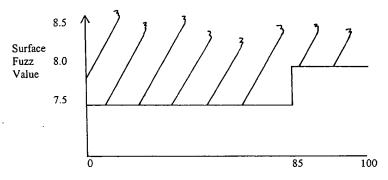
surface fuzz value exceeds 8.0." The term "optionally" in claim 25 applies only to the staple fibers. The term "optionally" cannot apply to the proviso because (1) it is clear from reading the claim that the proviso applies to the non-woven fibrous layer and not the staple fibers, and (2) an optional proviso would have no meaning; in other words, an optional proviso would not qualify anything.

The American Heritage Dictionary defines "proviso" as a clause in a document making a qualification or condition. In this case, it sets the condition that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0. A plain reading of claim 25 makes it clear that a non-woven fibrous layer having a bicomponent fiber content of less than 85% has a surface fuzz of at least 7.5, and a non-woven fibrous layer having a bicomponent fiber content of at least 85% has a surface fuzz of at least 8.0.

Dependent claim 27 further supports the correct interpretation of claim 25. Claim 27 states in whole "The face mask of claim 25, wherein the surface fuzz value is not less than 8.0 regardless of bicomponent fiber content." The phrase "regardless of bicomponent fiber content" would be meaningless if the one ignored (i.e., rendered optional) the proviso of claim 25.

Therefore, the interpretation of claim 25 in the ON REQUEST FOR REHEARING must be reversed in favor of the interpretation in the Board's DECISION ON APPEAL.

The following chart shows what is being claimed:



Wt% Bicomponent Fiber Content

II. Interpretation of Claim 32

For the purposes of this appeal, the relevant parts of claim 32 are identical to claim 25 except that claim 32 does not recite the term "optionally." Claim 25 is very clear that staple fibers are optional. As recognized by the Board in the DECISION ON APPEAL, claim 25 unambiguously states that the non-woven fibrous layer has a surface fuzz of at least 7.5 "unless the bicomponent fiber content is 85 weight percent or greater, in which case the fuzz value requirement must exceed 8.0."

If the term "optionally" is important to the misinterpretation of the proviso of claim 25, then claim 32 should still be interpreted correctly since it does not contain the term "optionally."

III. Claims 25-37 Are Not Obvious Over Dyrud

A. Under The Correct Claim Interpretation, All The Pending Claims Are Patentable Over Dyrud

The prosecution history of this application is reminiscent of the movie "Groundhog Day" in which the main character awakens each day to find that he is reliving the exact same events as the previous day. In this case, Appellants are appealing the exact same rejection that Applicants have already appealed. Rather than reiterate the same arguments that were made in the first Appeal, the following section will focus on the new comments that the Examiner added since the remand by the Board.

There appear to be no dispute as to nonwoven layers containing 85% or less of bicomponent fibers. As shown in Comparative Examples 24 and 25 (see Table 1 of the specification), nonwoven layers containing 85% or less of bicomponent fibers have average surface fuzz values substantially less than 7.5 (5.0 and 6.0 for 70% and 85%, respectively). Thus, the nonwoven fibrous layers of Dyrud containing 85% or less of bicomponent fibers would not inherently possess a surface fuzz value of at least 7.5.

On remand from the Board, the Examiner issued an Office Action that was mailed on May 16, 2003. In the Response to Arguments section on page 6 of the Office Action, the Examiner has acknowledged that Dyrud is not effective prior art for surface fuzz values exceeding 8.0.² Under the proper claim interpretation, all the claimed non-woven fibrous layers having a bicomponent fiber content of 85% or greater have surface fuzz values exceeding 8.0. Therefore, all claimed masks, both below and above 85% bicomponent fibers, are patentable over Dyrud.

In other words, it appears that the principle unresolved issue is claim interpretation. If the claims are interpreted as in the DECISION ON APPEAL, then there appears to be agreement that the

¹ In the Office Communication mailed July 31, 2003, the Examiner incorrectly asserted that Examples 24 and 25 do not contain at least 40% thermally bonding fibers. This is wrong because bicomponent fibers are thermally bonding fibers. See Appellants' specification at page 3, lines 13-15, page 6, lines 20-26, and page 8, line 37 - page 9, line 2. ² Appellants have argued in the previous Appeal and Request for Reconsideration that, based on the correct claim interpretation, Dyrud does not enable nor inherently anticipate or render obvious the claimed invention. In the Response to Arguments, the Examiner has acknowledged that these arguments are "persuasive;" however, the Examiner has rejected these arguments in view of the new claim interpretation in the On Request for Rehearing.

claims are patentable over Dyrud. If the claims are misinterpreted as in the ON REQUEST FOR REHEARING, then there is not agreement.

B. Under Any Claim Interpretation, Claims 28, 31, 33 and 35-37 Are Patentable Over Dyrud

Claims 28, 31, 33 and 35-37 recite surface fuzz values of 8.4 or greater regardless of bicomponent fiber content. As discussed above, the Examiner has acknowledged that Dyrud is not a valid prior art reference for surface fuzz values greater than 8.0. Since there is no dispute that claims 28, 31, 33 and 35-37 recite surface fuzz values greater than 8.0, the section 103 rejection of these claims should be withdrawn.

C. Under Any Claim Interpretation, All the Pending Claims Are Patentable Over Dyrud

Under either interpretation, the claims are additionally patentable because (1) there is no motivation to modify the Dyrud reference and (2) in view of Appellants' showing of unexpected results.

Dyrud broadly disclosed use of 25 to 100% bicomponent fibers. None of Dyrud's examples use 100% bicomponent fibers, and there is no suggestion of any special desirability of masks made from 100% bicomponent fibers. As the Federal Circuit discussed in Ultradent, "Even if the . . . tests confirm [defendant's] contention that the compositions containing 3% and 5% carboxymethylene provide the level of viscosity and stickiness required by the claims of the [plaintiff's] patent, that does not mean that the claimed matrix material is necessarily described by the [cited] patent. . . . [T]here are many possible compositions that could be made within the range of carboxymethylene concentration 0.05% to 5% that the [cited] patent discloses. [Defendant's] burden at trial was to show that the [cited] patent would describe to one of skill in the art ... combinations meeting the limitations of the claims, from among the many possible candidates." Ultradent Prod., Inc. v. Life-Like Cosmetics, Inc., 127 F.3d 1065, 44 U.S.P.Q.2d 1336 (Fed. Cir. 1997). See also Suntiger, Inc. v. Scientific Research Funding Group, 189 F. 3d 1327, 81 U.S.P.Q.2d 1811 (Fed. Cir. 1999) citing In re Ruschig, 379 F.2d 990, 154 U.S.P.Q. 122 (C.C.P.A 1967) ("The case law makes clear that disclosure of a generic expression encompassing a large number of possible variants is not a description of all of them.") Thus, there is no motivation in the prior art to select 100% bicomponent fibers amongst Dyrud's generic disclosure of a broad range of fiber compositions.

Second, even if a *prima facie* case of obviousness had been established, the unexpected and superior results establish patentability over the alleged *prima facie* case of obviousness. As stated by the Board:

The specification goes on to state that "[a] comparison of the results of these examples with examples 1-23 demonstrate that the method of the present invention provides unexpected superior results over hot molding processes for forming shaping layers of thermally bonding fibers." If a fuzz value of greater than 8.0 is considered to be the criterion for "superior," 14 of the 26 averages meet this standard.

Be that as it may, the issue before us is whether shells made in accordance with the Dyrud method fall within the scope of claim 25.

Decision On Appeal, page 8 (emphasis added). From the above-quoted statement, it appears that the Board does not dispute that applicants have shown "unexpected superior results." Even if Dyrud established a *prima facie* case of obviousness over the claimed invention (which it does not), the unexpected superior results would overcome that *prima facie* case.

IX. Conclusion

For the foregoing reasons, appellants respectfully submit that the Examiner has erred in rejecting this application under 35 U.S.C. § 103. Please reverse the Examiner on all counts.

Dated this th day of October, 2003.

Respectfully submitted,

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Attorney for Appellant

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APPENDIX

- 25. A fibrous filtration face mask for filtering contaminants and/or particulate matter, which comprises:
 - (a) a means for securing the mask to the face of the wearer; and
- (b) a non-woven fibrous layer attached to the securing means and containing (i) at least about 40% thermally bonding fibers based on the weight of the fibers in the non-woven fibrous layer, at least about 10 wt. % of the fibers in the non-woven fibrous layer being bicomponent fibers, and optionally (ii) staple fibers, the non-woven fibrous layer being molded in a cup-shaped configuration and having a surface fuzz value of not less than 7.5 after being subjected to a surface fuzz abrasion test, with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0.
- 26. The face mask of claim 25, wherein the mask has at least two non-woven layers containing bonded thermally bonding fibers, the first non-woven layer containing about 60 wt. % bicomponent fibers and about 40 wt. % staple fibers, the second non-woven layer containing about 70 wt. % bicomponent fiber and about 30 wt. % binder fiber, the first layer being located on the inside of the second layer, and wherein the mask has a filtration layer containing blown microfibers located between the first and second non-woven layers.
- 27. The face mask of claim 25, wherein the surface fuzz value is not less than 8.0 regardless of bicomponent fiber content.
- 28. The face mask of claim 25, wherein the surface fuzz value is not less than 9.0 regardless of bicomponent fiber content.
- 29. The face mask of claim 25, wherein the bicomponent fiber content is at least 50 wt %.

- 30. The face mask of claim 25, wherein the bicomponent fiber content is at least 20 weight percent.
- 31. The face mask of claim 25, wherein the surface fuzz value is not less than 8.4 regardless of bicomponent fiber content.
 - 32. A fibrous filtration face mask, which comprises:
 - (a) a harness; and
- (b) a nonwoven fibrous layer attached to the harness and containing at least 40 weight percent thermally bonding fibers based on the weight of the fibers in the nonwoven fibrous layer, at least 10 weight percent of the fibers in the nonwoven fibrous layer being bicomponent fibers, the non-woven fibrous layer being molded in a cup-shaped configuration and having a surface fuzz value of not less than 7.5 after being subjected to a surface fuzz abrasion test, with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0.
- 33. The fibrous filtration face mask of claim 32, wherein the nonwoven fibrous layer contains at least 20 weight percent bicomponent fibers, 0 to 80 weight percent binder fibers, and 0 to 50 weight percent staple fibers, based on the weight of fibrous material in the nonwoven fibrous layer, and wherein the nonwoven fibrous layer supports a filtration layer that contains melt-blown microfibers.
- 34. The fibrous filtration face mask of claim 32, wherein the nonwoven fibrous layer consists essentially of at least 20 weight percent bicomponent fibers, 0 to 80 weight percent binder fibers, and 0 to 50 weight percent staple fibers, based on the weight of fibrous material in the nonwoven fibrous layer, and wherein the nonwoven fibrous layer supports a filtration layer that contains melt-blown microfibers.

- 35. The face mask of claim 25, wherein the surface fuzz value is not less than 9.5 regardless of bicomponent fiber content.
- 36. The face mask of claim 32, wherein the surface fuzz value is not less than 9.0 regardless of bicomponent fiber content.
- 37. The face mask of claim 32, wherein the surface fuzz value is not less than 9.1 regardless of bicomponent fiber content.